NAD SERVICE MANUAL

STARTING SERIAL NUMBER A 3401J00001

3240

INTEGRATED AMPLIFIER

PAGE	CONTENTS
3	REAR/FRONT PANEL LAYOUT
4	SPECIFICATIONS
5	ALIGNMENT METHOD
6	PREAMP, VOLUME PCB LAYOUT
7—8	AMPLIFIER PCB LAYOUT
9—10	AMPLIFIER SCHEMATIC
11—12	WIRING DIAGRAM
13	TRANSFORMER WIRING (MULTI—VOLTAGE)
14	PREAMP, VOLUME PCB PARTS LOCATION
15	AMPLIFIER PCB PARTS LOCATION
16—19	ELECTRICAL PARTS LIST
20—21	EXPLODED VIEW
22—24	EXPLODED PARTS LIST
25	PACKING DIAGRAM

SERVICE SAFETY PRECAUTIONS (UL)

1. Use exact replacement parts for critical locations, marked " ⚠ ".
2. Return lead dress to original position, and re—install protective covers.
3. Before returning to customer, test for shock hazard; use either method A or B:

A. Leakage test, "cold":
1. Unplug AC cord; turn power switch ON.
2. Connect one lead of High Voltage Insulation Tester to both prongs of AC plug.
3. Touch other lead to all exposed metal parts.
4. Impedance measurement must be 0.3 — 5.0 Megohms.

B. Leakage test, "live":
1. Plug unit directly into AC outlet; do not use isolation transformer.
2. Connect one lead of Leakage Current Tester to earth ground.
3. Touch other lead to all exposed metal parts.
4. Leakage measurement must be less than 0.5 milliamps.

REAR PANEL

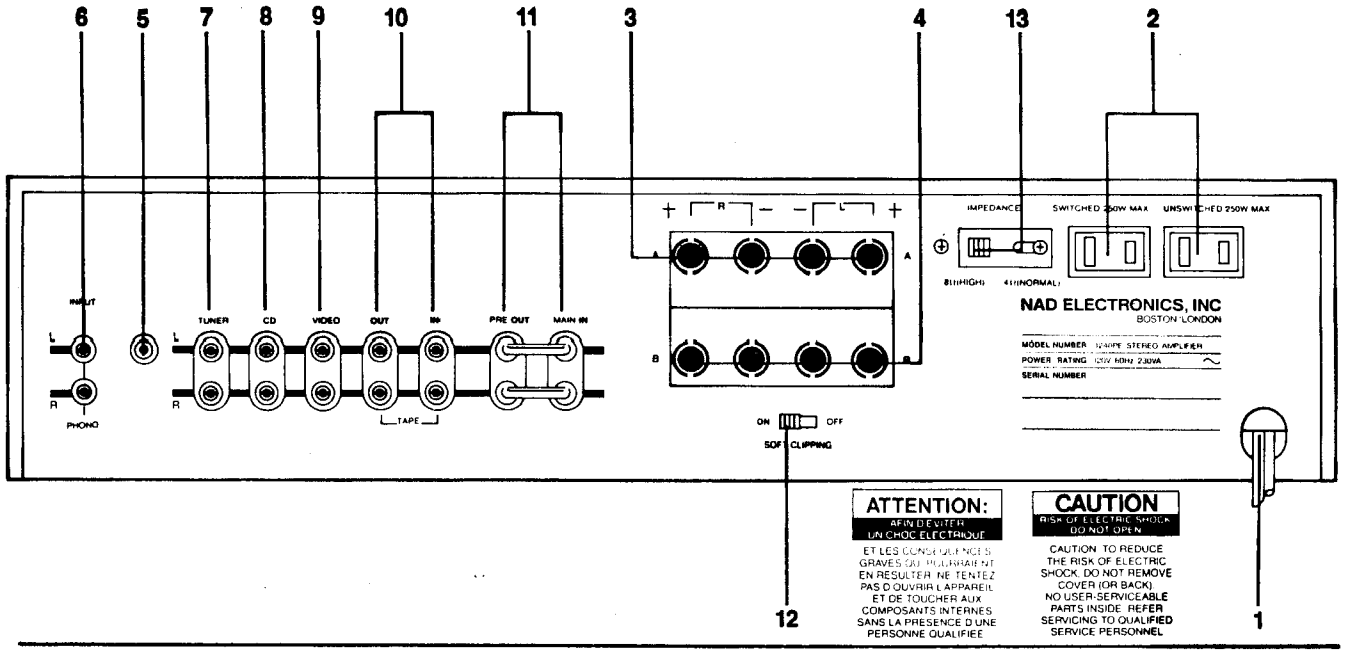
1. AC Line Cord.
2. AC Convenience Outlets.
3. Speakers A.
4. Speakers B.
5. Phono Ground.
6. Phono Input.
7. Tuner Input.
8. CD Input.
9. Video Input.
10. Tape Input/Output.
11. Preamp Out, Main In.
12. Soft Clipping.
13. Speaker Impedance.

LE PANNEAU ARRIERE

1. Cordon d'alimentation.
2. Prises CA.
3. Enceintes A.
4. Enceintes B.
5. Masse phonolecteur.
6. Entree phono.
7. Entrée tuner.
8. Entrée lecteur de disque compact.
9. Entrée vidéo.
10. Entrée/Sortie magnetophone.
11. Sortie de préamplification.
12. Ecrêtage en douceur.
13. Impedance.

RÜCKSEITE

1. Netzkabel
2. Sekundar-Steckdosen
3. Anschlusse fur Lautsprechergruppe A.
4. Anschlusse fur Lautsprechergruppe B
5. Masseanschluß fur Plattenspieler
6. Plattenspieler-Eingang
7. Tuner-Eingang
8. CD-Eingang
9. Video.
10. Tonbandgerat Eingang Ausgang.
11. Vorverstarker-Ausgang Endverstarker-Eingang.
12. Impulsbegrenzungs-Schalter
13. Lautsprecherimpedanz-Schalter.



FRONT PANEL

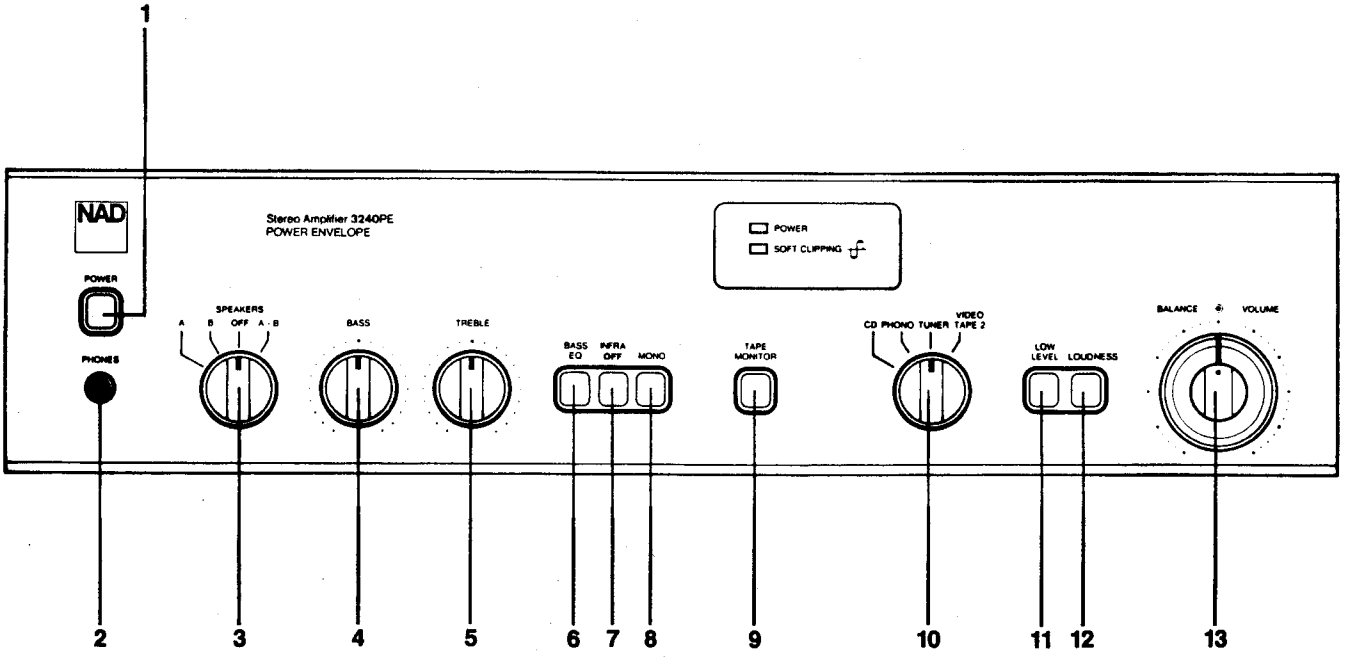
1. Power.
2. Phones.
3. Speaker Selector.
4. Bass.
5. Treble.
6. Bass EQ.
7. Infrasonic Filter Off.
8. Mono.
9. Tape Monitor.
10. Input Selector.
11. Low Level.
12. Loudness.
13. Volume/Balance.

LE PANNEAU AVANT

1. Alimentation.
2. Casque d'ecoute.
3. Selecteur d'enceintes.
4. Graves.
5. Aigus.
6. Bass Eq.
7. Filtre infrasonique.
8. Mono.
9. Commutateur de surveillance de bande.
10. Selecteur d'entrée.
11. « Low level ».
12. Commutateur de contour sonore.
13. Volume/Equilibrage.

FRONTSEITE

1. Netzschalter
2. Kopfhorer-Anschluß
3. Lautsprecher-Wahlschalter
4. Baßsteller
5. Hohensteller
6. Baß Equalizer-Schalter
7. Schalter fur Infraschall-Filter.
8. Mono Stereo-Schalter
9. Vor Uber Band-Schalter
10. Eingangs-Wahlschalter
11. Schalter fur Lautstarkeabsenkung
12. Gehornichtige/Lautstarke-Einstellung
13. Lautstarke/Balance-Steller



Specifications
NAD 3240PE Stereo Amplifier

Measured in accordance with EIA Standerd RS– 490 (formerly IHF A– 202) .
Measurements referred to 8 ohms are taken with Speaker Impedance selector at " 8 ohm (High) ." Measurements for 4 and 2 ohms are taken with impedance selector at " 4 ohm (Normal) ."

Power Amplifier Section

CONTINUOUS AVERAGE POWER		
OUTPUT AT 8 OHMS (minimum RMS power per channel, both channels driven, with no more than the rated distortion)		40W (16dBW)
Rated distortion (THD) 20Hz– 20kHz		0.03%
Clipping power, 1kHz (maximum continuous power per channel)		50W
Dynamic Headroom at 8 ohms		+6dB
Dynamic power (maximum) short–term power per channel)	8 ohms	160W
	4 ohms	200W
	2 ohms	250W
Damping factor		> 50
Slew factor		> 50
Slew rate		15V/μsec
T.H.D. and SMPTE.I.M. distortion from 250 mW to rated output		< 0.03%
Input Impedance		22kohm
Input sensitivity for 1 Watt/ 40Watts out		160mV/ 1.0V
Power amp gain		25dB (18X)

Preamplifier Section

Phono Input	
Input Impedance	R= 47kohm, C= 100pF
Input Sensitivity (1kHz)	0.55mV for 1 Watt out 3.5mV for 40 Watts out
Signal–to–Noise Ratio with cartritdge connected, A–weighted	76dB re 5mV
Input Overload at 20 Hz/ 1kHz/ 20kHz	20/ 180/ 1500mV
RIAA Accuracy	±0.5dB
High–Level Inputs (CD, Video, Tape)	
Input Impedance	R= 15kohm, C= 100pF
Input Sensitivity	26mV for 1W out 160mV for 40W out
Signal–to–Noise ratio,A–weighted	86dB re 1W out 102dB re 40W out
Input Overload	> 10V
Frequency Responce	20Hz– 20kHz ±0.5dB
Outputs	
Preamp output impedance	600ohm
Tape output impedance	Source Z+1000ohm
Controls	
Treble	±7dB at 10kHz
Bass	±10dB at 50Hz
Bass Equalization	+3dB at 70Hz +6dB at 40Hz
Infrasonic Filter	–3dB at 12Hz 12dB/octave
Low Level (audio muting)	–20dB

Physical Specifications

Width x Height x Depth	42 x 10.8 x 38 cm 16.5 x 42.5 x 15 in
Net Weight	6.7kg (14 lbs 14 oz)
Shipping Weight	8kg (17 lb 12 oz)
Power Consumption	50/ 60Hz at 110, 120, 220, or 240 VAC 200W

Specifications are those in effect at the time ofprinting. NAD reserves the right to change specifications or designs at any time without notice.

ALIGNMENT METHOD

MAIN AMPLIFIER ALIGNMENT

IMPORTANT NOTES:

1) Before adjusting, remove input signal and load, and set Speaker Impedance switch to 8 ohms. (Reset to 4 ohms when finished.)
2) These adjustments are always necessary after repair to main amplifier.
3) After repair, it is recommended to use current limiter (40-80W lightbulb) in series with AC mains line, for initial turn-on.

A. CENTER VOLTAGE ADJUSTMENT

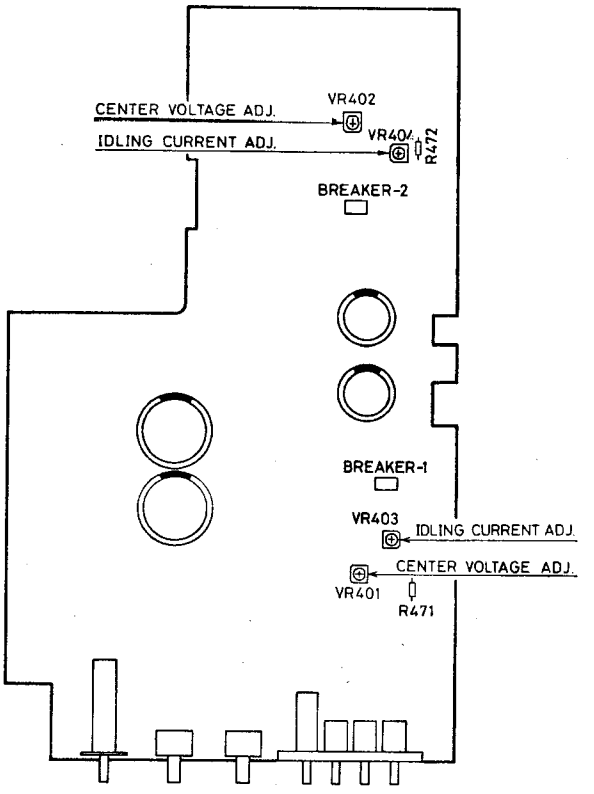
1. Connect DVM across L channel (R channel) output terminals.
2. Turn on, and adjust VR-401 (VR-402) for reading of 0V ± 30 mVDC.

B. IDLE CURRENT ADJUSTMENT

1. Remove solder short across R-471 and R-472.
2. Connect DVM across R-471.
3. Turn on and adjust VR-403 for reading of 28 mV ± 2 mVDC.
4. Repeat, using R-472, adjust VR-404.

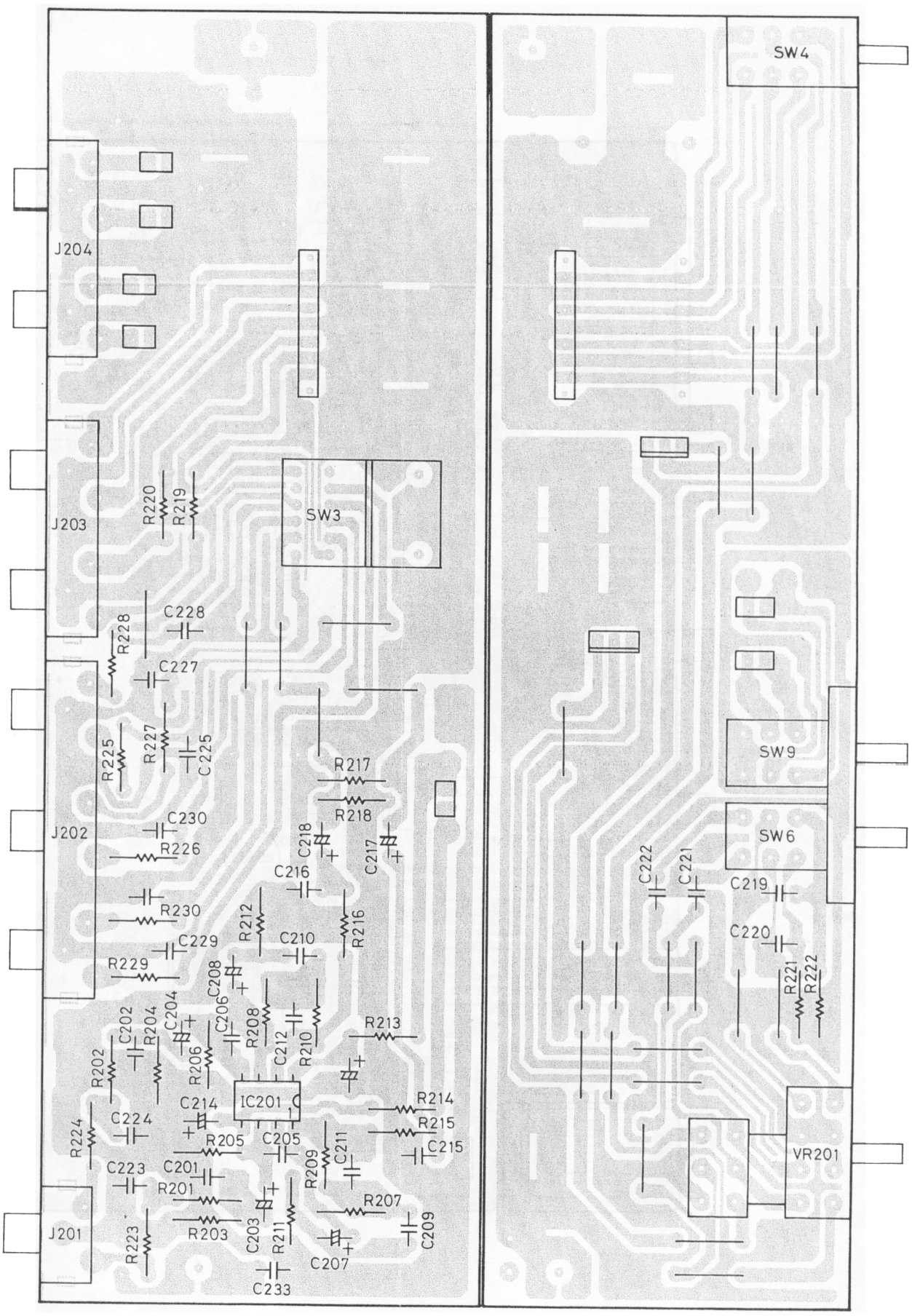
C. FINAL ADJUSTMENT

1. Leave power on minimum 5 minutes.
2. Repeat center voltage and idle current adjustments.
3. When finished, replace solder short across R-471 and R-472.

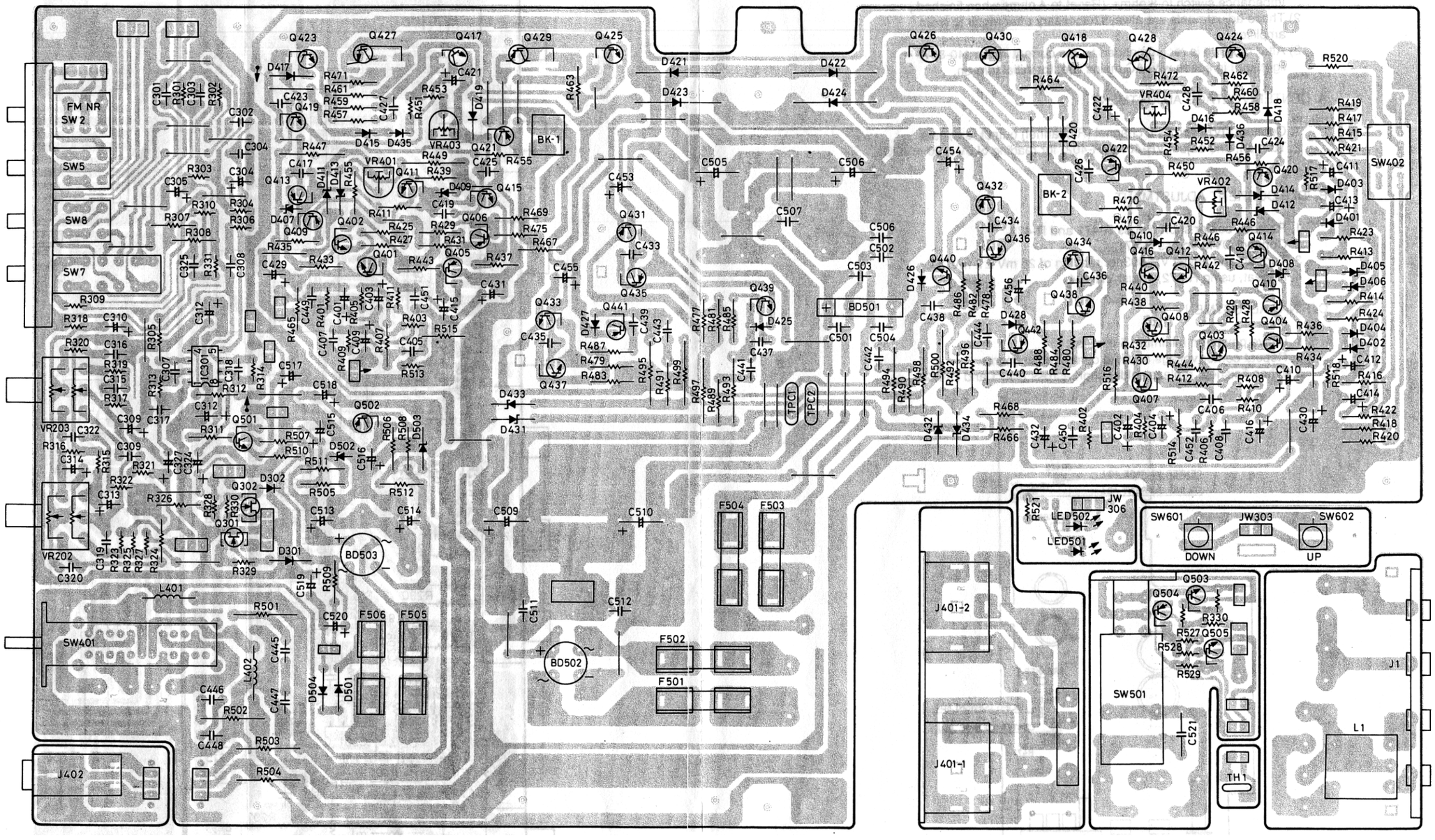


AMPLIFIER ALIGNMENT POINT

PREAMP, VOLUME PCB LAYOUT



AMPLIFIER PCB LAYOUT

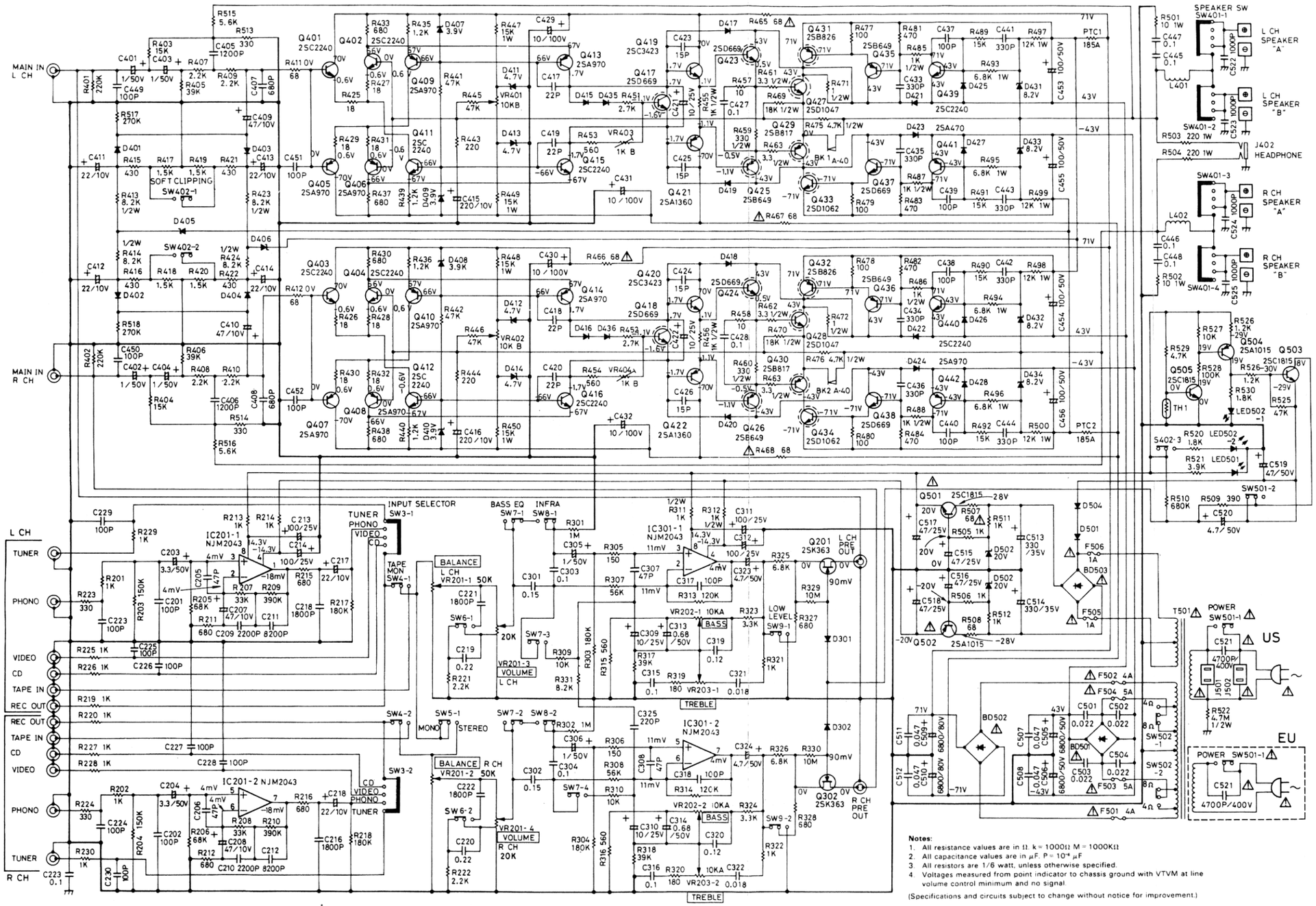


NAD 3240PE
AMPLIFIER SCHEMATIC

Make leakage current or resistance measurements to determine that exposed metal parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

Leakage current should not exceed 0.5 mA as measured through a 1.5 Kohm resistor paralleled by a 0.15 mfd capacitor to the earth ground.

Symbol	No.	06461—up
R 489, 490, 491, 492		2.2k
C 437, 438, 439, 440		39pF
C 441, 442, 443, 444		560pF
Q 435, 436		BD680
Q 437, 438		BD679
D 421, 422, 423, 424		BY500—100

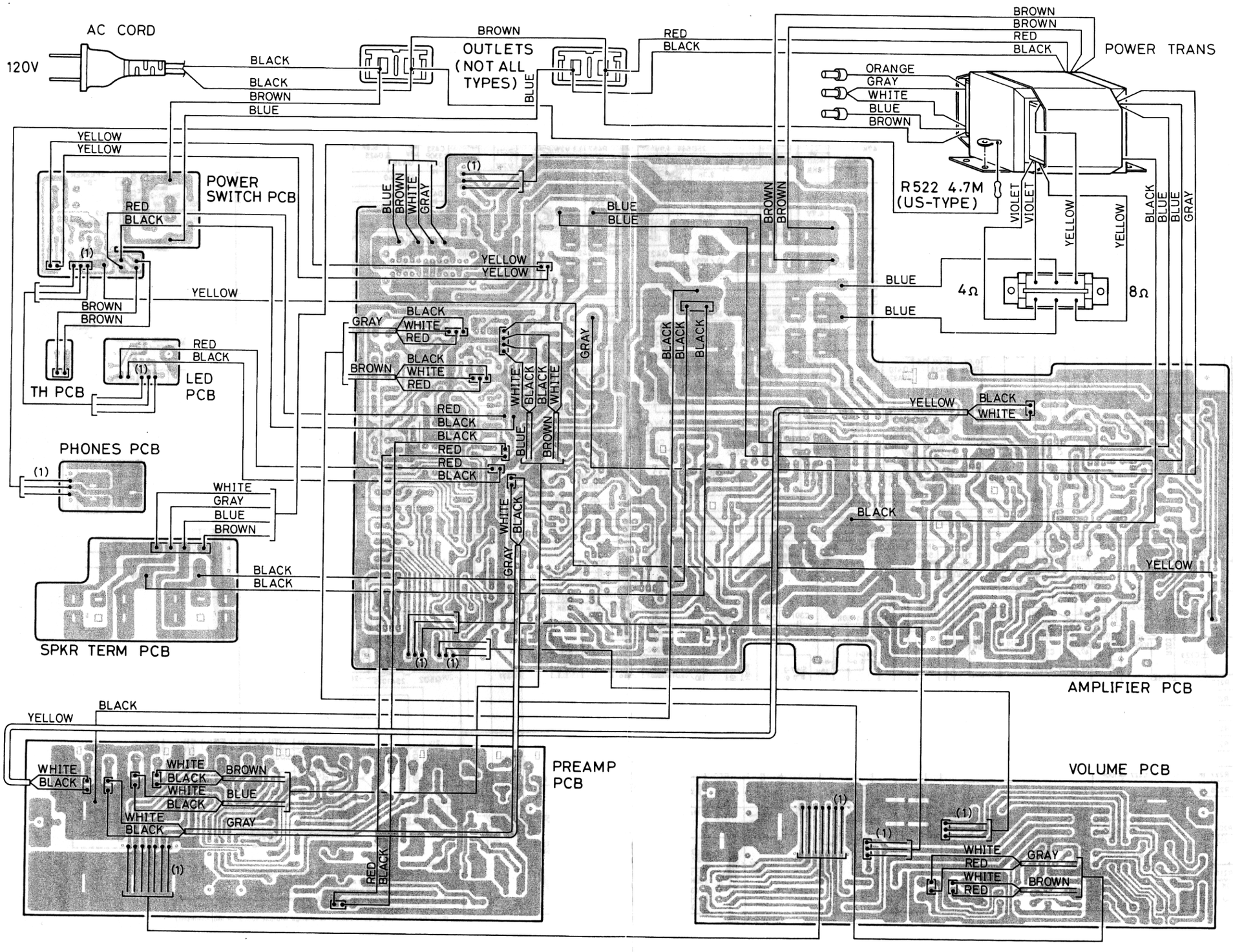


Notes:

1. All resistance values are in Ω. k = 1000Ω M = 1000KΩ
2. All capacitance values are in μF. P = 10^{-6} μF
3. All resistors are 1/6 watt, unless otherwise specified.
4. Voltages measured from point indicator to chassis ground with VTVM at line volume control minimum and no signal.

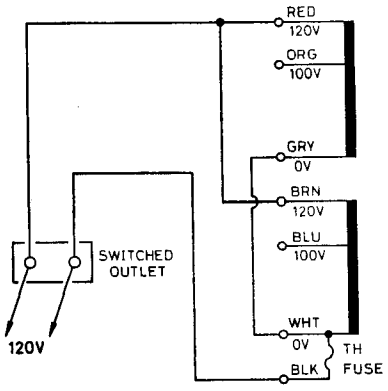
(Specifications and circuits subject to change without notice for improvement.)

WIRING DIAGRAM

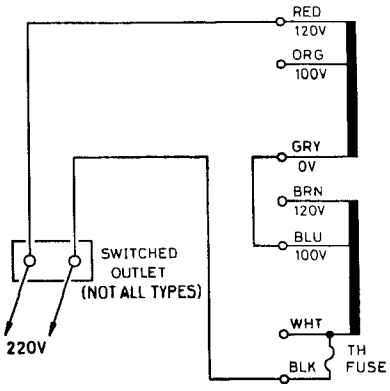


POWER TRANSFORMER PRIMARY WIRING (MULTI-VOLTAGE)

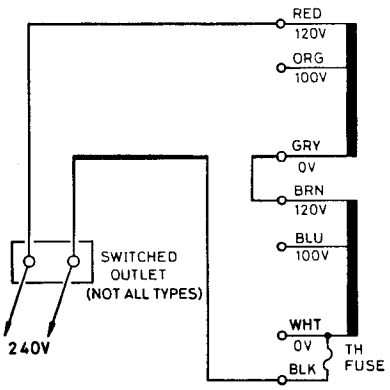
120V



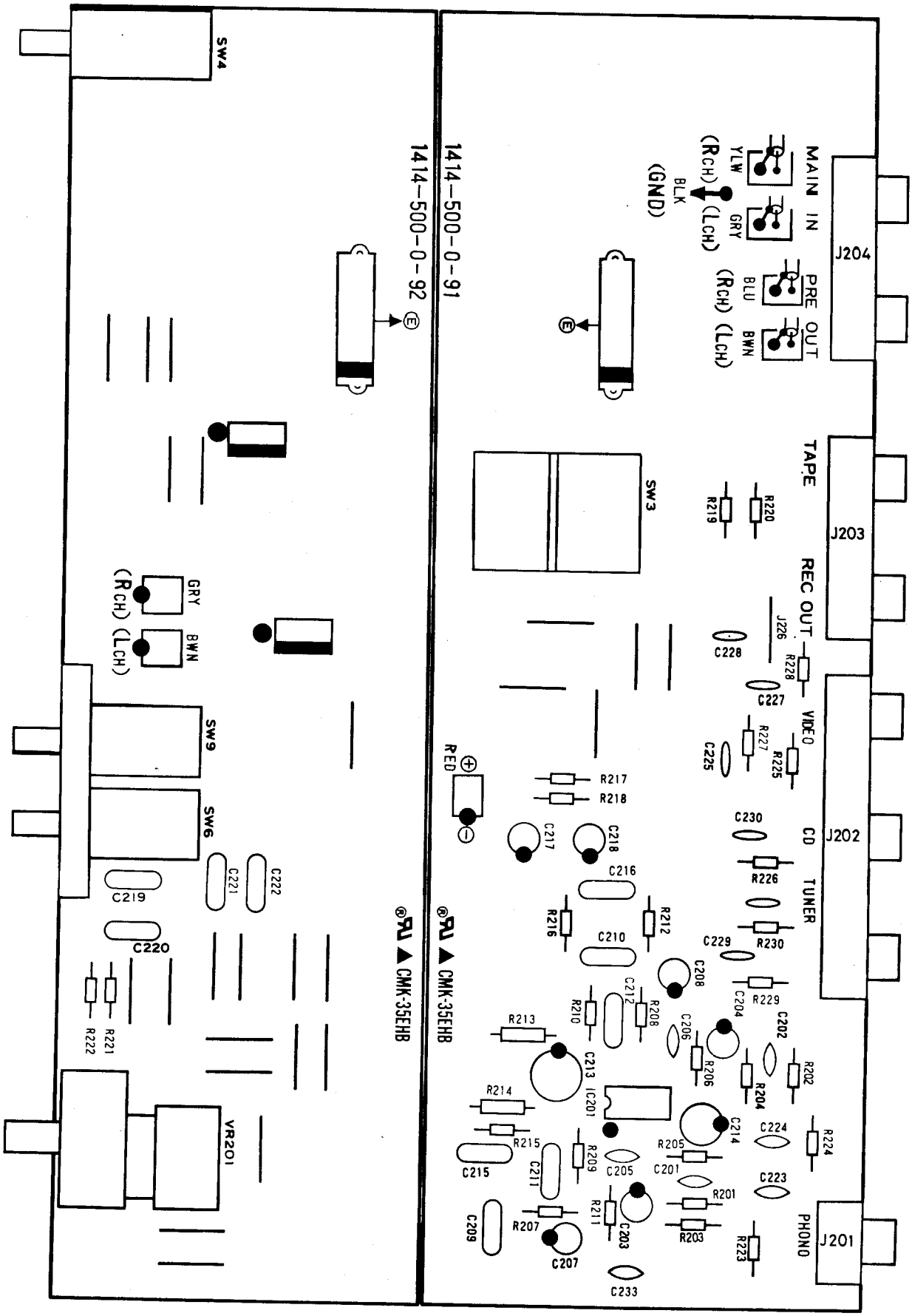
220V



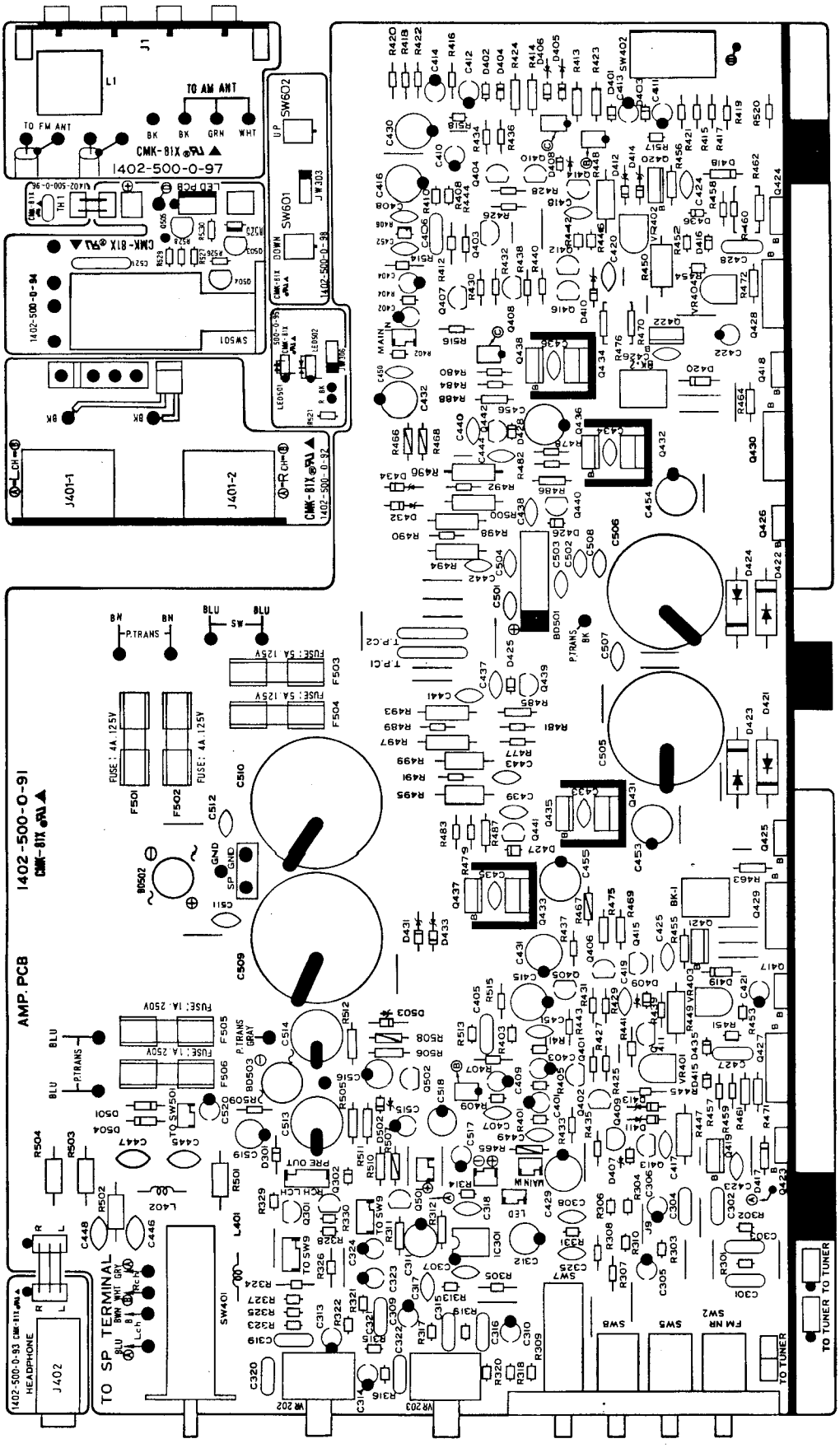
240V



VOLUME, PREAMP PCB PARTS LOCATION



AMPLIFIER PCB PARTS LOCATION



ELECTRICAL PARTS LIST

SYMBOL NO.	PARTS NO.	DESCRIPTION			REF
R 201, 202, 219, 220, 225, 226, 227, R 227, 228, 229, 230, 321, 322, 505, R 506, 511, 512	0920−861−0−24	Res, Carb, 1k	+−5%	1/ 6W	
R 203, 204	0920−861−5−44	Res, Carb, 150k	+−5%	1/ 6W	
R 205, 206	0920−866−6−34	Res, Carb, 68k	+−5%	1/ 6W	
R 207, 208	0920−863−3−34	Res, Carb, 33k	+−5%	1/ 6W	
R 209, 210	0920−863−9−44	Res, Carb, 390k	+−5%	1/ 6W	
R 211, 212, 215, 216, 327, 328, 433, R 434, 437, 438	0920−866−8−14	Res, Carb, 680	+−5%	1/ 6W	
R 213, 214, 311, 312	0920−021−0−24	Res, Carb, 1k	+−5%	1/ 2W	
R 217, 218, 303, 304	0920−861−8−44	Res, Carb, 180k	+−5%	1/ 6W	
R 221, 222, 407, 408, 409, 410	0920−862−2−24	Res, Carb, 2.2k	+−5%	1/ 6W	
R 223, 224, 513, 514	0920−863−3−14	Res, Carb, 330	+−5%	1/ 6W	
R 301, 302	0920−861−0−54	Res, Carb, 1M	+−5%	1/ 6W	
R 305, 306	0920−861−5−14	Res, Carb, 150	+−5%	1/ 6W	
R 307, 308	0920−865−6−34	Res, Carb, 56k	+−5%	1/ 6W	
R 309, 310, 527	0920−861−0−34	Res, Carb, 10k	+−5%	1/ 6W	
R 313, 314	0920−861−2−44	Res, Carb, 120k	+−5%	1/ 6W	
R 315, 316, 453, 454	0920−865−6−14	Res, Carb, 560	+−5%	1/ 6W	
R 317, 318, 405, 406	0920−863−9−34	Res, Carb, 39k	+−5%	1/ 6W	
R 319, 320	0920−861−8−14	Res, Carb, 180	+−5%	1/ 6W	
R 323, 324	0920−863−3−24	Res, Carb, 3.3k	+−5%	1/ 6W	
R 325, 326	0920−866−8−24	Res, Carb, 6.8k	+−5%	1/ 6W	
R 329, 330	0920−861−0−64	Res, Carb, 10M	+−5%	1/ 6W	
R 331	0920−868−2−24	Res, Carb, 8.2k	+−5%	1/ 6W	
R 401, 402	0920−862−2−44	Res, Carb, 220k	+−5%	1/ 6W	
R 403, 404, 489, 490, 491, 492	0920−861−5−34	Res, Carb, 15k	+−5%	1/ 6W	
R 411, 412	0920−866−8−04	Res, Carb, 68	+−5%	1/ 6W	
R 413, 414, 423, 424	0920−028−2−24	Res, Carb, 8.2k	+−5%	1/ 2W	
R 415, 416, 421, 422	0920−864−3−14	Res, Carb, 430	+−5%	1/ 6W	
R 417, 418, 419, 420	0920−861−5−24	Res, Carb, 1.5k	+−5%	1/ 6W	
R 425, 426, 427, 428, 429, 430, 431, R 432	0920−861−8−04	Res, Carb, 18	+−5%	1/ 6W	
R 435, 436, 439, 440	0920−861−2−24	Res, Carb, 1.2k	+−5%	1/ 6W	
R 441, 442, 445, 446, 525	0920−864−7−34	Res, Carb, 47k	+−5%	1/ 6W	
R 443, 444	0920−862−2−14	Res, Carb, 220	+−5%	1/ 6W	
R 447, 448, 449, 450	0925−431−5−34	Res, Metal 15k	+−5%	1W	
R 451, 452	0920−862−7−24	Res, Carb, 2.7k	+−5%	1/ 6W	
R 455, 456, 485, 486, 487, 488	0925−421−0−24	Res, Metal 1k	+−5%	1/ 2W	
R 457, 458	0920−861−0−04	Res, Carb, 10	+−5%	1/ 6W	
R 459, 460	0925−423−3−14	Res, Metal 330	+−5%	1/ 2W	
R 461, 462, 463, 464	0925−423−3−84	Res, Metal 3.3	+−5%	1/ 2W	
⚠ R 465, 466, 467, 468, 507, 508	0921−116−8−04	Res, Carb, 68	+−5%	1/ 4W	
R 469, 470	0920−021−8−34	Res, Carb, 18k	+−5%	1/ 2W	
R 471, 472	0920−020−1−04	Res, Carb, 1	+−5%	1/ 2W	
R 475, 476	0920−024−7−24	Res, Carb, 4.7k	+−5%	1/ 2W	
R 477, 478, 479, 480	0920−861−0−14	Res, Carb, 100	+−5%	1/ 6W	
R 481, 482, 483, 484	0920−864−7−14	Res, Carb, 470	+−5%	1/ 6W	
R 493, 494, 495, 496	0925−436−8−24	Res, Metal 6.8k	+−5%	1W	
R 497, 498, 499, 500	0925−431−2−34	Res, Carb, 12k	+−5%	1W	
R 501, 502	0925−431−0−04	Res, Metal 10	+−5%	1W	
R 503, 504	0925−432−2−14	Res, Metal 220	+−5%	1W	
R 509	0920−863−9−14	Res, Carb, 390	+−5%	1/ 6W	
R 510	0920−816−8−44	Res, Carb, 680k	+−5%	1/ 4W	
R 515, 516	0920−865−6−24	Res, Carb, 5.6k	+−5%	1/ 6W	
R 517, 518	0920−862−7−44	Res, Carb, 270k	+−5%	1/ 6W	
R 520, 530	0920−861−8−24	Res, Carb, 1.8k	+−5%	1/ 6W	

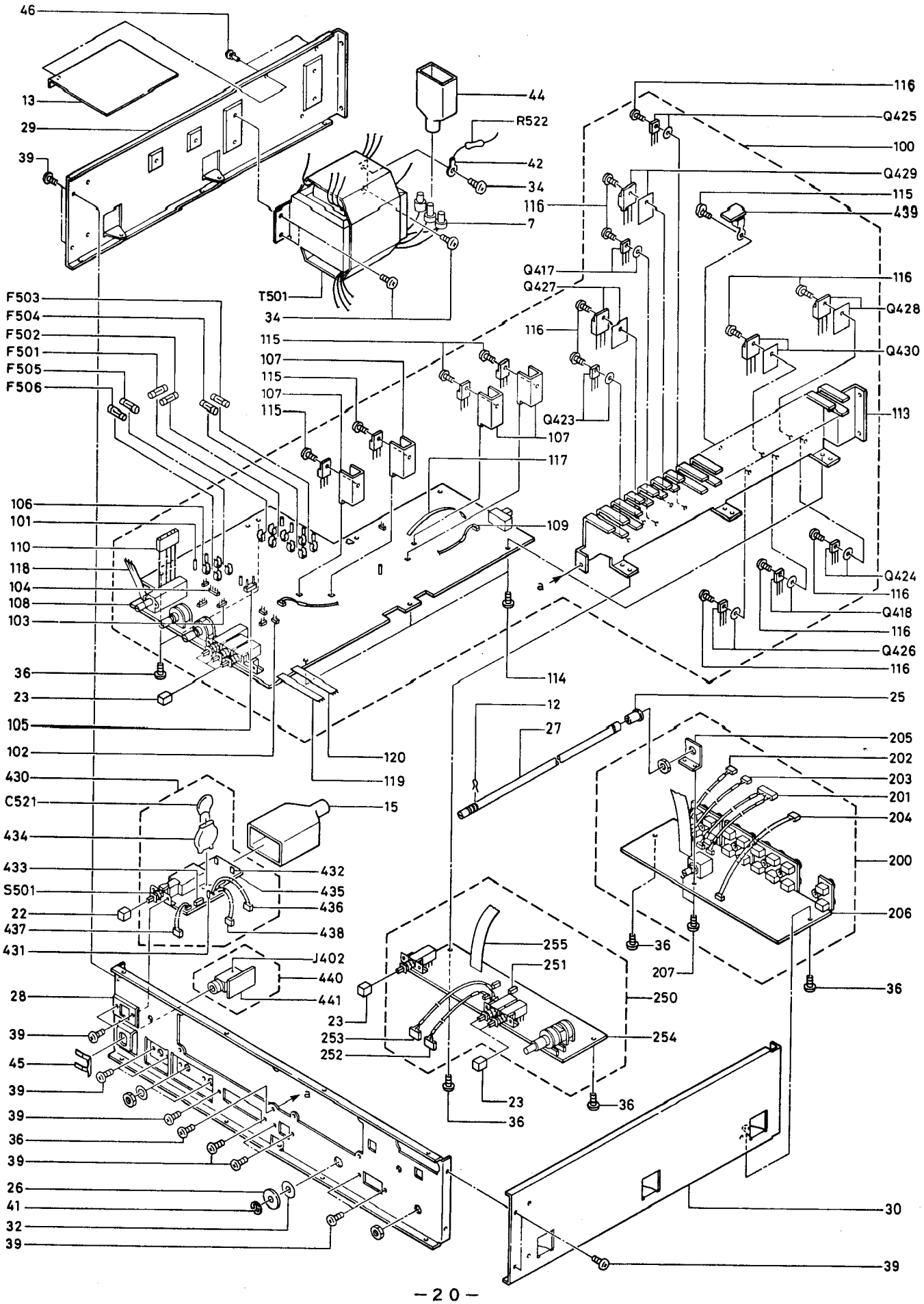
SYMBOL NO.	PARTS NO.	DESCRIPTION			REF
R 521	0920−863−9−24	Res, Carb, 3.9k	+−5%	1/ 6W	
R 522	0920−024−7−54	Res, Carb, 4.7M	+−5%	1/ 2W	A, A 1
R 526	0920−862−2−34	Res, Carb, 22k	+−5%	1/ 6W	
R 528	0920−861−0−44	Res, Carb, 100k	+−5%	1/ 6W	
R 529	0920−864−7−24	Res, Carb, 4.7k	+−5%	1/ 6W	
C 203, 204	0937−853−3−86	Cap, El	3.3uF	+−20% 50V	
C 205, 206, 307, 308	0930−204−7−04	Cap, Cer	47pF	+−5% 50V	
C 207, 208, 409, 410, 515, 516, 517, C 518	0937−834−7−06	Cap, El	47uF	+−20% 25V	
C 209, 210	0933−852−2−24	Cap, Poly	2200pF	+−5% 50V	
C 211, 212	0933−858−2−24	Cap, Poly	8200pF	+−5% 50V	
C 213, 214, 311, 312	0937−831−0−16	Cap, El	100uF	+−20% 25V	
C 215, 216, 221, 222	0933−851−8−24	Cap, Poly	1800pF	+−5% 50V	
C 217, 218, 411, 412, 413, 414	0937−832−2−06	Cap, El	22uF	+−20% 25V	
C 219, 220	0933−452−2−44	Cap, Poly	0.22uF	+−5% 50V	
C 223, 224, 225, 226, 227, 228, 229, C 230	0931−251−0−15	Cap, Cer	100pF	+−10% 50V	
C 233, 445, 446, 447, 448	0939−904−7−00	Cap, Cer	0.1uF	+80−20% 50V	
C 301, 302	0933−851−5−46	Cap, Poly	0.15uF	+−20% 50V	
C 303, 304, 315, 316, 427, 428	0933−851−0−45	Cap, Poly	0.1uF	+−10% 50V	
C 305, 306, 401, 402, 403, 404	0937−850−1−06	Cap, El	1uF	+−20% 50V	
C 309, 310, 421, 422	0937−831−0−06	Cap, El	10uF	+−20% 25V	
C 313, 314	0937−856−8−96	Cap, El	0.68uF	+−20% 50V	
C 317, 318, 437, 438, 439, 440, 449, C 450, 451, 452	0930−201−0−14	Cap, Cer	100pF	+−5% 50V	
C 319, 320	0933−851−2−46	Cap, Poly	0.12uF	+−20% 50V	
C 321, 322	0933−851−8−35	Cap, Poly	0.018uF	+−10% 50V	
C 323, 324, 520	0937−854−7−86	Cap, El	4.7uF	+−20% 50V	
C 325	0930−202−2−14	Cap, Cer	220pF	+−5% 50V	
C 405, 406	0933−851−2−25	Cap, Poly	1200pF	+−10% 50V	
C 407, 408	0930−206−8−14	Cap, Cer	680pF	+−5% 50V	
C 415, 416	0937−822−2−16	Cap, El	220uF	+−20% 16V	
C 417, 418, 419, 420	0930−202−2−04	Cap, Cer	22pF	+−5% 50V	
C 423, 424, 425, 426	0930−201−5−04	Cap, Cer	15pF	+−5% 50V	
C 429, 430, 431, 432	0935−971−0−06	Cap, El	10uF	+−20% 100V	
C 433, 434, 435, 436, 441, 442, 443, C 444	0930−203−3−14	Cap, Cer	330pF	+−5% 50V	
C 453, 454, 455, 456	0937−851−0−16	Cap, El	100uF	+−20% 50V	
C 501, 502, 503, 504	0939−904−5−00	Cap, Cer	0.022uF	+80−20% 50V	
C 505, 506	0939−908−4−00	Cap, El	6800uF	+−20% 50V	
C 507, 508, 511, 512	0939−904−6−00	Cap, Cer	0.047uF	+80−20% 50V	
C 509, 510	0939−908−5−00	Cap, El	6800uF	+−20% 80V	
C 513, 514	0938−943−3−16	Cap, El	330uF	+−20% 35V	
C 519,	0937−854−7−06	Cap, El	47uF	+−20% 50V	
C 521	0939−921−0−00	Cap, Cer	4700pF	+−10% 400V	
or	0939−922−0−00	Cap, Cer	4700pF	+−10% 400V	
C 522, 523, 524, 525	0931−251−0−25	Cap, Cer	1000pF	+−10% 50V	
Q 301, 302	0909−001−8−55	Tr,	2SK 363−GR		
Q 401, 402, 403, 404, 411, 412, 415, Q 416, 439, 440	0906−207−6−55	Tr,	2SC 2240−GR		
Q 405, 406, 407, 408, 409, 410, 413, Q 414, 441, 442	0906−207−7−55	Tr,	2SA 970−GR		
Q 417, 418, 423, 424, 437, 438	0903−006−3−03	Tr,	2SD 669A−C		
Q 419, 420	0902−012−2−25	Tr,	2SC 3423−Y		
Q 421, 422	0900−005−8−25	Tr,	2SA 1360−Y		

	SYMBOL NO.	PARTS NO.	DESCRIPTION	REF
	Q 425, 426, 435, 436	0901−003−8−03	Tr, 2SB 649A−C	
	Q 427, 428	0903−006−4−05	Tr, 2SD 1047−E	
	Q 429, 430	0901−003−9−05	Tr, 2SB 817−E	
	Q 431, 432	0904−005−7−00	Tr, BD912	
	Q 433, 434	0904−005−6−00	Tr, BD911	
	Q 501, 503, 505	0906−200−4−55	Tr, 2SC 1815−GR	
	Q 502, 504	0906−200−2−55	Tr, 2SA 1015−GR	
	D 301, 302, 401, 402, 403, 404, 415, D 416, 425, 426, , 427, 428, 435, 436,	0914−004−7−00	Diode 1N 4148	
	D 405, 406	0915−010−7−03	Diode−Zener RD15ESB3	
	D 407, 408, 409, 410	0915−009−6−01	Diode−Zener RD3.9ESB1	
	D 411, 412, 413, 414	0915−009−8−02	Diode−Zener RD4.7ESB2	
	D 417, 418, 419, 420	0915−014−2−00	Diode 1SS 81	
	D 421, 422, 423, 424	0913−007−3−00	Diode RGP 30B	
	D 431, 432, 433, 434	0915−008−5−02	Diode−Zener RD8.2ESB2	
	D 501, 504,	0913−005−7−00	Diode GP−15B	
	D 502, 503	0915−011−0−03	Diode−Zener RD20ESB3	
⚠	BD501	0913−007−4−00	Diode KBU 6D	
⚠	BD502, 503,	0913−002−7−00	Diode 2W02	
	LED 1	0916−021−7−00	LED, SLB−25MG 3	
	LED 2	0916−022−1−00	LED, SPB−25MVW	
	IC 201, 301	0911−091−2−00	IC, UPC 4570C	
⚠	BK1, 2	0045−400−0−00	Breaker	
		or 0045−401−0−00	Breaker	
⚠	F 501, 502	0045−078−0−00	Fuse, 4A/125V	A, A 1
⚠	F 501, 502	0045−089−0−00	Fuse, T. 4A/250V	B, B 1, C, C 1
⚠	F 503, 504	0045−079−0−00	Fuse, 5A/125V	A, A 1
⚠	F 503, 504	0045−090−0−00	Fuse, T. 5A/250V	B, B 1, C, C 1
⚠	F 505, 506	0045−047−0−00	Fuse, 1A/125V	A, A 1
⚠	F 505, 506	0045−007−1−21	Fuse, T. 1A/250V	B, B 1, C, C 1
	J201	0033−209−0−00	Jack−RCA, 2pin	
	J202	0033−211−0−00	Jack−RCA, 6pin	
	J203, 204	0033−210−0−00	Jack−RCA, 4pin	
	J401	0033−213−0−00	Terminal−Speaker	A, A 1, B, B 1, C 1
	J401	0033−214−0−00	Terminal−Speaker	C
	J402	0033−867−0−00	Jack−6.3mm, Headphone	
⚠	J501, 502	0033−036−0−00	Outlet−AC	A, A 1
	L 401, 402	0013−093−0−00	Coil, Spring	
	TPC1, 2	0918−002−4−00	Thermistor, DRE 185A	
	TH1	0918−002−5−00	Thermistor, PTH 487A−BC471	
	SW2/5/7/8	0028−005−0−00	SW−Push, FM NR/Mono/Infra/Bass Eq	
	SW3	0036−030−0−00	SW−Rotary, Input Select	
	SW4	0028−006−0−00	SW−Push, Tape Monitor	
	SW6/9	0028−004−0−00	SW−Push, Loudness/Low Level	
	SW401	0036−031−0−00	SW−Rotary, Speaker Select	
	SW402	0028−240−0−00	SW−Slide, Soft Clipping	
⚠	SW501	0028−009−0−00	SW−Push, Power	A, A 1
⚠	SW501	0028−010−0−00	SW−Push, Power	B, B 1, C, C 1
	SW502	0028−254−0−00	SW−Slide, Impedance Select	

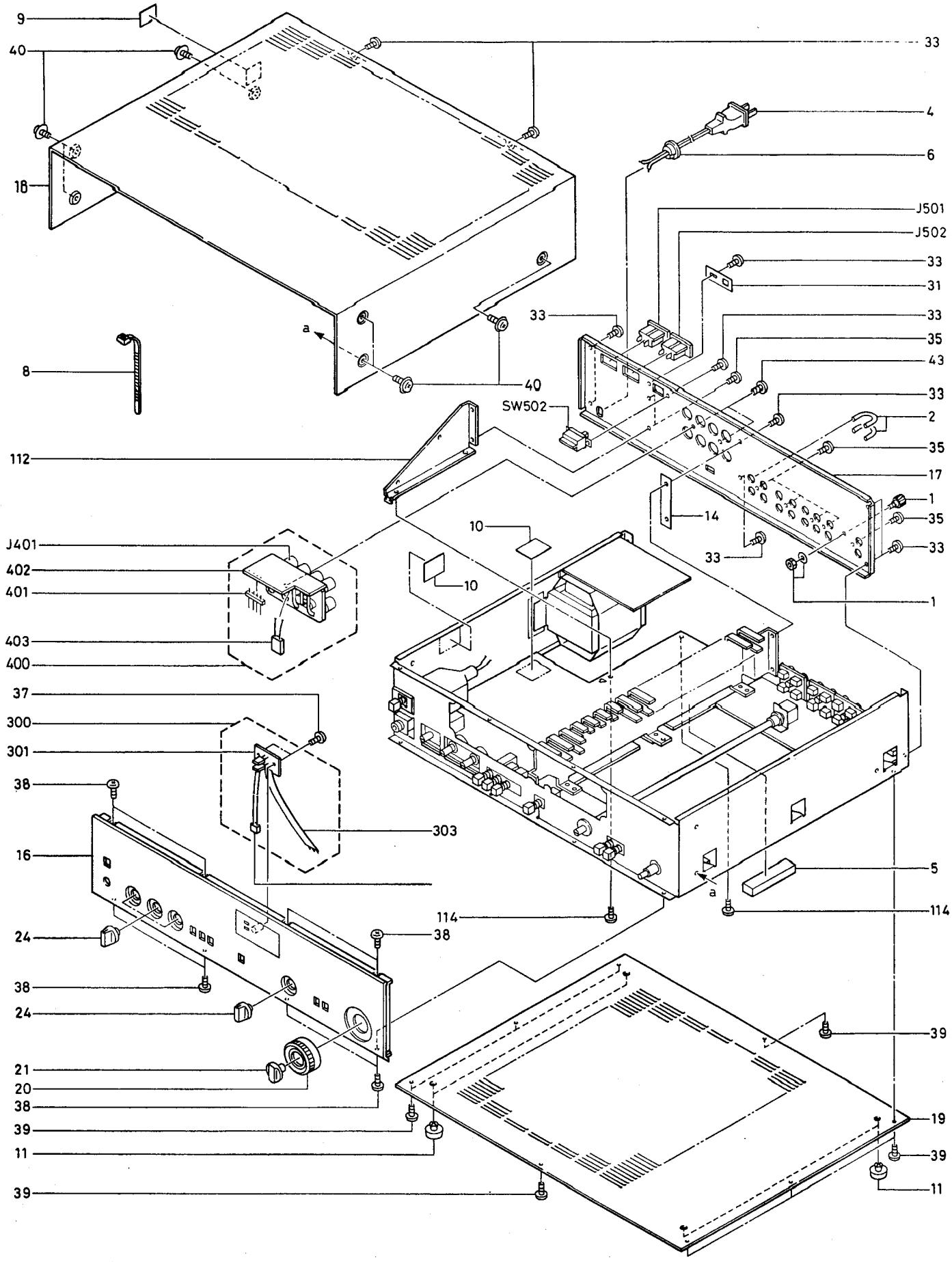
SYMBOL NO.	PARTS NO.	DESCRIPTION	REF
⚠ T 501	0019−871−0−00	Trans−Power	
VR201	0031−552−0−00	Volume/Balance Control, 20kB/50kBH	
VR301, 302	0031−551−1−03	Tone Control, 10kA	
VR401, 402	0031−835−1−03	VR−Semi, 10kB	
	or 0031−837−1−03	VR−Semi, 10kB	
VR403, 404	0031−837−1−02	VR−Semi, 1kB	
	or 0031−837−1−02	VR−Semi, 1kB	
SERIAL NO. 06461−up			
R 489, 490, 491, 492	0920−862−2−24	Res, Carb, 2.2k +−5% 1/ 6W	
C 437, 438, 439, 440	0930−203−9−04	Cap, Cer, 39pF +−5% 50V	
C 441, 442, 443, 444	0930−205−6−14	Cap, Cer, 560pF +−5% 50V	
Q 435, 436	0904−006−1−00	Tr, Darl, BD680	
Q 437, 438	0904−006−0−00	Tr, Darl, BD679	
D 421, 422, 423, 424	0913−007−8−00	Diode, BY500−100	

Product Safety Note: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components read carefully the product safety notice of this Service Manual. Don't degrade the safety of the product.

EXPLODED VIEW



EXPLODED VIEW



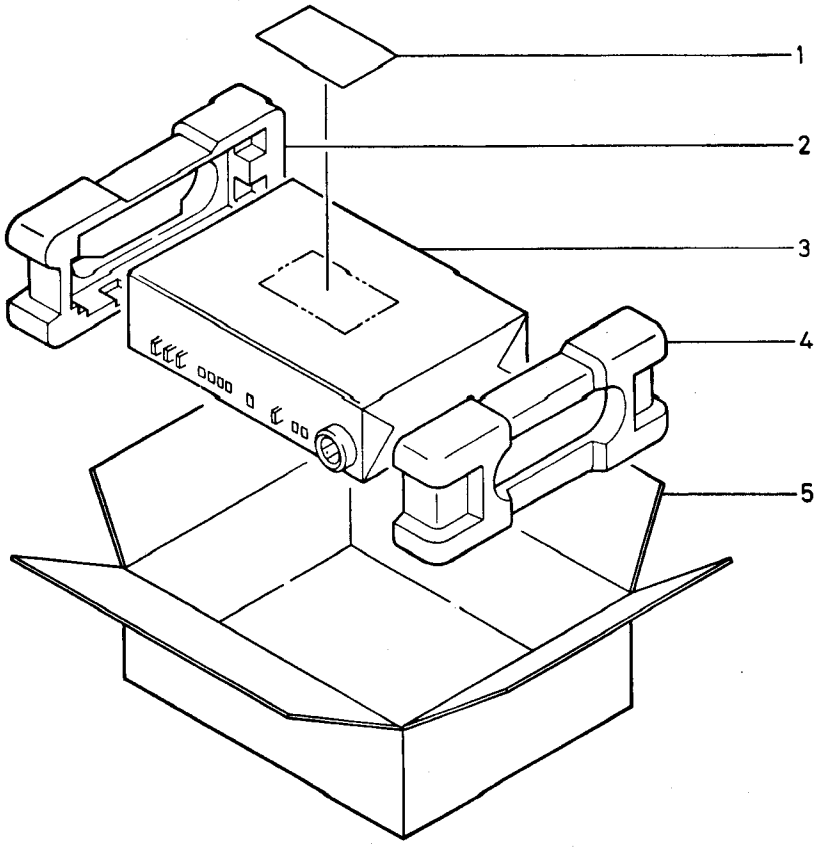
EXPLODED PARTS LIST

ITEM	PARTS NO.	NAME		QTY
1	0033−216−0−00	Earth Terminal		1
2	0034−485−0−00	Short Pin		2
3	Not used			
⚠ 4	0047−166−0−20	AC Cord	A, A 1	1
⚠ 4	0047−286−0−00	AC Cord	B	1
⚠ 4	0047−284−0−00	AC Cord	B 1	1
⚠ 4	0047−231−1−21	AC Cord	C, C 1	1
5	0062−599−0−00	Rubber Cushion		1
6	0064−610−0−00	Bush, SR− 4N− 4		1
7	0064−630−0−00	Wire Nut		3
8	0064−631−0−00	Lead−wire Clamp		14
9	0074−129−0−00	Caution Label	A, A 1	2
10	0074−157−0−00	Fuse Caution Label		1
11	0079−920−0−00	Foot, Rubber		4
12	1402−400−0−00	Spring, Joint		1
13	1402−730−0−00	AC−cover	A, A 1	1
14	1402−731−0−00	Sheet, Isolating		1
15	1402−732−0−00	Cover, Power Switch		1
16	1414−810−0−01	Panel, Front		1
17	1414−811−0−03	Panel, Rear	A, A 1	1
17	1414−815−0−03	Panel, Rear	B, B 1	1
17	1414−815−0−04	Panel, Rear	C, C 1	1
18	1402−812−0−01	Case, Metal		1
19	1402−813−0−00	Cover, Bottom		1
20	1402−860−0−01	Knob, Volume		1
21	1402−861−0−01	Knob, Blance		1
22	1402−865−0−01	Knob, Push (Green)		1
23	1402−865−0−02	Knob, Push (Black)		6
24	1402−867−0−01	Knob, Rotary		4
25	1402−870−0−00	Joint B		1
26	1402−871−0−00	Guide, Shaft		1
27	1402−872−0−00	Shaft		1
28	1402−874−0−00	Chassis, Front		1
29	1402−875−1−00	Angle L, Side		1
30	1402−876−1−00	Angle R, Side		1
31	1402−880−0−00	Plate, Lock		1
32	1402−889−0−00	Sheet, Bonding		1
33	0972−730−0−83	Screw−S Tite M3x 8 (Black)		10
34	0972−740−0−53	Screw−S Tite M4x 5		4
35	0973−230−0−83	Screw−B Tite M3x 8 (Black)		7
36	0973−230−0−85	Screw−B Tite M3x 8		7
37	0973−526−0−85	Screw−P Tite M2.6x 8		2
38	0975−030−0−63	Screw−C Tite M3x 6 (Black)		8
39	0975−030−0−65	Screw−C Tite M3x 6		22
40	0975−140−0−63	Screw−S Tite M4x 6 (Black)		6
41	0981−105−0−11	E−Ring, 5mm		1
42	0987−101−0−00	Washer−Lug 4x 15x 0.2		1
43	0973−230−0−83	Screw−B Tite M3x 8 (Black)	A, A 1	2
43	0973−230−1−01	Screw−B Tite M3x 10	B, B 1, C, C 1	2
44	1420−555−0−00	Cover		1
45	0065−370−0−00	Plate J, Mount		1
46	0064−641−0−00	Rivet, Plastic	A, A 1	2

ITEM	PARTS NO.	NAME		QTY
100	1414−002−0−00	Amplifier PCB Ass'y	A, A 1	1
100	1414−004−0−00	Amplifier PCB Ass'y	B, B 1, C, C 1	1
101	0034−302−0−00	Pin Terminal		9
102	0034−740−0−02	Connector−Pin, 2pin		6
103	0034−740−0−03	Connector−Pin, 3pin		2
104	0034−740−0−04	Connector−Pin, 4pin		1
105	0034−777−0−02	Connector−Pin, 2pin		1
106	0045−506−0−00	Holder−Fuse		12
107	0049−034−0−00	Heat Sink		4
108	1402−500−0−91	Amplifier PCB (N.S.P)	A, A 1	1
108	1402−503−0−91	Amplifier PCB (N.S.P)	B, B 1, C, C 1	1
109	1402−546−0−00	Wire−Connector, 2pin		1
110	1402−547−0−00	Wire−Connector, 4pin		1
111	Not used			
112	1402−877−0−00	Support, PCB		1
113	1402−878−0−00	Heat Sink		1
114	0973−230−0−85	Screw−B Tite M3x 8		5
115	0976−530−0−85	Screw−Tap M3x 8		4
116	0976−530−1−05	Screw−Tap M3x 10		11
117	1402−520−0−00	Joiner, PCB		1
118	1402−521−0−00	Joiner, PCB		1
119	1402−522−0−00	Joiner, PCB		1
120	1402−523−0−00	Joiner, PCB		1
200	1414−021−0−00	Pre−Amplifier PCB A'ssy		1
201	1402−542−0−00	Wire−Connector, 4pin		1
202	1402−543−0−00	Wire−Connector, 2pin		1
203	1402−544−0−00	Wire−Connector, 2pin		1
204	1402−545−0−00	Wire−Connector, 2pin		1
205	1402−879−0−00	Holder−L		1
206	1414−500−0−91	Pre−Amplifier PCB (N.S.P)		1
207	0975−030−0−65	Screw−C Tite M3x 6		2
250	1414−025−0−00	Volume PCB A'ssy		1
251	0034−609−0−03	Connector, 3pin		2
252	1402−540−0−00	Wire−Connector, 3pin		1
253	1402−541−0−00	Wire−Connector, 3pin		1
254	1414−500−0−92	Volume PCB (N.S.P)		1
255	1402−528−0−00	Joiner, PCB		1
300	1414−035−0−00	LED PCB A'ssy	A, A 1	1
300	1414−036−0−00	LED PCB A'ssy	B, B 1, C, C 1	1
301	1402−500−0−95	LED PCB (N.S.P)	A, A 1	1
301	1402−503−0−95	LED PCB (N.S.P)	B, B 1, C, C 1	1
302	1414−540−0−00	Wire−Connector, 2pin		1
303	1402−525−0−00	Joiner, PCB		1
400	1402−050−0−00	Speaker Terminal PCB Ass'y	A, A 1	1
400	1402−051−0−00	Speaker Terminal PCB Ass'y	B, B 1, C 1	1
400	1402−052−0−00	Speaker Terminal PCB Ass'y	C	1
401	0034−777−0−04	Connector−Pin 4pin		1
402	1402−500−0−92	Speaker Terminal PCB	A, A 1	1
402	1402−503−0−92	Speaker Terminal PCB	B, B 1, C, C 1	1
403	1402−548−0−00	Wire−Connector, 2pin		1

ITEM	PARTS NO.	NAME		Q'TY
430	1402−065−0−00	Power Switch PCB Ass'y	A, A 1	1
430	1402−066−0−00	Power Switch PCB Ass'y	B, B 1, C, C 1	1
431	0034−476−0−00	Check Pin		1
432	0034−326−0−00	Pin Terminal		3
433	0034−609−0−03	Connector, 3pin		1
434	0064−644−0−00	Cover, Speaker Killer		1
435	1402−500−0−94	Power Switch PCB (N.S.P)	A, A 1	1
435	1402−503−0−94	Power Switch PCB (N.S.P)	B, B 1, C, C 1	1
436	1402−553−0−00	Wire Connector, 2pin		1
437	1402−554−0−00	Wire Connector, 2pin		1
438	1402−555−0−00	Wire Connector, 2pin		1
439	1402−500−0−96	Thermistor PCB	A, A 1	1
439	1402−503−0−96	Thermistor PCB	B, B 1, C, C 1	1
440	1402−070−0−00	Phone PCB Ass'y	A, A 1	1
440	1402−071−0−00	Phone PCB Ass'y	B, B 1, C, C 1	1
441	1402−500−0−93	Phone PCB	A, A 1	1
441	1402−503−0−93	Phone PCB	B, B 1, C, C 1	1

PACKING DIAGRAM



ITEM	PARTS NO.	NAME	Q'TY
1	1414—920—0—02	Instruction	1
2	1402—900—0—00	Styrofoam, Left	1
3	0998—013—9—00	Poly—bag, PB— 58x 55—5	1
4	1402—901—0—00	Styrofoam, Right	1
5	1402—910—0—04	Gift Box	1